

Claims:

1. An ink-jet recording material comprising a support, and at least one porous ink-receptive layer containing
5 inorganic fine particles and polyvinyl alcohol provided as a main component of a binder on the support, wherein at least one of said ink-receptive layers contains a polymer emulsion containing a polymer compound which shows a hydrophilic property at a temperature region of a predetermined
10 temperature, which is a thermosensitive temperature, or less and shows a hydrophobic property at a temperature region higher than the thermosensitive temperature in an amount of 1 to 25% by weight based on the amount of the polyvinyl alcohol in terms of a solid content.
15
2. The ink-jet recording material according to Claim 1, wherein the inorganic fine particles are fine particles in which wet process silica is pulverized to have an average secondary particle size of 400 nm or less.
20
3. The ink-jet recording material according to Claim 1, wherein the inorganic fine particles are fumed silica.
4. The ink-jet recording material according to Claim 1,
25 wherein the polymer emulsion is contained in an amount of 5 to 20% by weight based on the amount of the polyvinyl alcohol in terms of a solid content.
5. The ink-jet recording material according to Claim 1,
30 wherein the polymer emulsion has a thermosensitive temperature in the range of 5 to 50°C.
6. The ink-jet recording material according to Claim 5,
35 wherein the polymer emulsion has a thermosensitive temperature in the range of 5 to 40°C.

7. The ink-jet recording material according to Claim 1, wherein the polymer emulsion has an average particle diameter in the range of 10 to 300 nm.
- 5 8. The ink-jet recording material according to Claim 7, wherein the polymer emulsion has an average particle diameter in the range of 50 to 200 nm.
9. The ink-jet recording material according to Claim 1, wherein a crosslinking agent of the polyvinyl alcohol is further contained in the ink-receptive layer.
- 10 10. The ink-jet recording material according to Claim 9, wherein the crosslinking agent is boric acid, borax or a borate.
- 15 11. The ink-jet recording material according to Claim 1, wherein the support is a water-resistant support.
12. The ink-jet recording material according to Claim 11, wherein the water-resistant support is a polyolefin resin-coated paper.
- 20 13. The ink-jet recording material according to Claim 1, wherein the polymer emulsion comprises an N-alkyl or N-alkylene (meth)acrylamide compound.
- 25 14. The ink-jet recording material according to Claim 13, wherein the polymer emulsion comprises a homopolymer or copolymer of at least one monomer selected from the group consisting of N-ethyl(meth)acrylamide, N-isopropyl(meth)acrylamide, N-cyclopropyl(meth)acrylamide, N-ethyl(meth)acrylamide, N,N-diethylacrylamide, N,N-dimethyl(meth)acrylamide, N-n-propyl(meth)acrylamide, N-methyl-N-n-propylacrylamide, N-methyl-N-isopropylacrylamide, N-(meth)acryloylpyrrolidine, N-(meth)acryloylpiperidine, N-tetrahydrofurfuryl(meth)acrylamide, N-methoxypropyl(meth)-
- 30
- 35

acrylamide, N-ethoxypropyl(meth)acrylamide, N-isopropoxypropyl(meth)acrylamide, N-ethoxyethyl(meth)acrylamide, N-(2,2-dimethoxyethyl)-N-methylacrylamide, N-methoxyethyl(meth)acrylamide and N-(meth)acryloylmorpholine.

5

15. The ink-jet recording material according to Claim 13, wherein the polymer emulsion comprises a homopolymer or copolymer of at least one monomer selected from the group consisting of N-isopropylacrylamide, N-n-propylacrylamide,
10 N,N-diethylacrylamide and N-acryloylmorpholine.